

HY`Y_ca 'Vc\fh A cV]`Zi b_Ui » Ybj Yfgcf[i b[']a '@UbX_fY]g Df][b]hn'Ui Z

/ ei ch/8]Y 8 Yi hgWX Y "HY `Y_ca 'j YfV YggYfh `X]Y
A cV]`Zi b_j Yfgcf[i b[']a '@UbX_fY]g Df][b]hn 'a]h bYi Yb
GhUbXcfhYb 'i bX '9fk Y]hYfi b[Yb 'Ui Z'@H9 'i bX '); "'9fZU\fYb
G]Y 'a Y\f'ØVYf 'X]Y [YghY][YfhY '6UbXVfY]hY 'i bX 'XYb '5i gV`]W_
Ui Z'k Y]hYfY '9bhk]W_`i b[Yb 'V]q *& * "/ ei ch/



JYfVYggYfhY'AcV]`Zib_jYfgcf[ib[.'9]b'YbhgWXY]XYbXYfGWXf]hh'ZØf'X]Y'; YaY]bXY'Df][b]hn

a @UbX_fY]g Df][b]hn \ Uh X]Y HY Y_ca]b XYb YhnhYb nk Y]
A cbUhYb VYXYi hYbXY : cfhgW f]hhY]b XYf A cV] Z b_j Yfgcf[i b[
Yfn]Y h" 8]YgY 9bhk]W_i b[_ca a h b]W h bi f XYb 6Øf[Yfl]bbYb
ni [i hY z gcb XYfb gd]Y [Y h Ui W Y]bYb U``[Ya Y]bYb HfYbX k]XYfz
XYf X]Y X][]hU Y HfUbgZcfa Uh]cb]b ``AbX`]W Yb ; YV]YhYb
j cfUbhfY]Vh" 8i fW XYb BYi VUi Y]bYg A cV] Z b_ghUbXcfhg gck]Y
X]Y 9fk Y]hYfi b[Y]bYg @H9! i bX Y]bYg); !GhUbXcfhg k]fX X]Y

A cV]'Zi b_!5VXYW_i b['gck c\``]b'XYf': `ÀWXY'U`g'Ui WX']b'XYb \dip bYbfÀi a Yb'j cb'; YVÀi XYb'XYi h`]WX'j YfVYggYfh"

K Yf]gh VYhfcZZYb3

A]h'XYa '5i gVUi '\Uh'X]Y'HY'Y_ca 'X]Y'? UdUn]hÀhYb'Ub'a Y\fYfYb ghfUhY[]gW\'k]W\h][Yb'GhUbXcfhYb']b'; Ø`]hn!FYYhnž? UfghÀXh'i bX D`UhhYbVi f['j YfghÀf_h"8]YgY'A U» bU\a Yb'g]bX'VYgcbXYfg'k]W\h][\mathbb{Z} \mathbb{Z}

$9]bX]fY_hYfBihnYbZØfX]YFY[]cb$

8]Y 'HY 'Y_ca '[]Vh'Ubž'XUgg'XYf'6YXUfZ'Ub'6UbXVfY]hY 'À\f`]W\'i a Yhk U'' \$'DfcnYbh'ghY][h"8]YgY'Ni bU\a Y']gh'Y]bY'FYU_h]cb'Ui Z'X]Y ZcfhgW\fY]hYbXY'8][]hU`]g]Yfi b[ž'X]Y'Yg'gck c\`'Df]j UhdYfgcbYb'U`g Ui W\'I bhYfbY\a Yb'Yfa Ò[`]W\hž'YZZ]n]YbhYf'ni '_ca a i b]n]YfYb i bX'ni 'UfVY]hYb"'; Ycf['j cb'K U[bYfž'I bhYfbY\a YbggdfYW\Yf'XYf 8Yi hgW\Yb'HY`Y_ca ž'VYhcbhž'XUgg'X]YgY'9I dUbg]cb'YbhgW\Y]XYbX]ghži a 'XYf'ghY][YbXYb'BUW\ZfU[Y'[YfYW\h'ni 'k YfXYb'i bX'X]Y@YVYbgei U`]hÀh']b'XYf'FY[]cb'ni 'Yf\Ò\Yb"

8]Y'Ni_i bZh'XYf'A cV]`Zi b_ghUbXcfhY']a @UbX_fY]g'Df][b]hn

 $5_{hi} Y```VYhfY]Vh'X]Y`HY`Y_ca `]a `@UbX_fY]g`Df][b]hn`]bg[YgUa h`) -GhUbXcfhYž'k Ug`Y]bYf`VYY]bXfi W_YbXYb`< Ui g\U`hgUVXYW_i b['j cb fi bX'- - `DfcnYbh`Ybhgdf]W\h''`6]g`&$&* `d`Ubh`XUg`I bhYfbY\a Ybž k Y]hYfY`&+ `GhUbXcfhY`\]bni ni <math>Z\emptyset[Yb`gck]Y`' ' `VYghY\YbXY :i b_a UghYb`a]h`@H9`cXYf`); `ni `Yfk Y]hYfb"`8]Yg`V]YhYh`b]W\h'bi f j YfVYggYfhY`?ca a i b]_Uh]cbga <math>O[`]WX_Y]hYbZ'gcbXYfb'_Ubb`Ui W k]fhgW\UZh`]W\Y`=a di `gY`ZØf`X]Y`FY[]cb`gYhnYbZ']bXYa `Yg I bhYfbY\a Yb`Ubn]Y\hZ'X]Y`Ui Z'[i hY`a cV]`Y`?cbbY_h]j]hÀh Ub[Yk]YgYb`g]bX''$

Ni gUa a YbUfVY]h']gh'XYf'GW\`ØggY`

 $8]Y `HY`Y_ca `VYhcbhž`XUgg`X]Y `9fk Y]hYfi b[`XYg`A cV]`Z b_bYhnYg]b `Yb[Yf`Ni gUa a YbUfVY]h`a]h``c_U`Yb`?ca a i bYb`i bX ; fi bXghØW_gY][YbhØa Yfb`YfZc`[h"'<math>\pm$ b`X]YgYa `?cbhYl h`]gh`Yg k]W\h][ž`[YY][bYhY': `ÀW\Yb`ZØf`bYi Y`GhUbXcfhY`ni `Z]bXYb" ; fi bXghØW_gY][YbhØa Yfž`X]Y \pm hYfYggY`\UVYbž`_ObbYb`g]W\`Ub`X]Y 8 Yi hgW\Y': i b_hi fa `k YbXYb"'8]YgY` \pm b]h]Uh]j Y`nY][hž`k]Y`k]W\h][X]Y`I bhYfghØhni b[`XYf'; Ya Y]bgW\UZh`ZØf`X]Y`X][]hU`Y`9bhk]W_`i b[]gh"

: Un]h. '9]b 'GW f]hh']b 'X]Y 'X][]hU`Y 'Ni _i bZh

8 Y hU1`c

6Ygi WXYb'G]Y'i bg'Ui Z.'a Y]b!VYf`]b"bYh